**To:** **Harold Holmes, Cynthia Marvin and James Goldstene**

**From:** **Andrea Hricko, USC**

**Date:** **September 6, 2011**

**Comments on (1) *Supplemental Staff Report* dated July 5, 2011, pertaining to the 2010 Commitments to Further Reduce Diesel PM Emissions at Four High Priority Railyards and (2) the *CEQA Functional Equivalent Document* (FED)**

Thank you for the opportunity to provide comments on the *CEQA Functional Equivalent Document* related to reducing diesel emissions at four high priority rail yards. Although the ARB did not specifically request comments on the *Supplemental Staff Report* dated July 5, 2011, pertaining to the 2010 Commitments to Further Reduce Diesel PM Emissions at Four High Priority Railyards, I have concerns about several parts of that Staff Report, so I am submitting comments on that also.

Questions re Independent Auditor and Advance Notice of Inspections. At the start, I have several questions related to comments and discussion at the June 2010 Board Meeting concerning the railyard commitments.

1. Please advise why there has been no independent audit of the railroad submissions, as I had suggested at the ARB Board meeting in June 2010. At that time, it appeared that both the Board Chair, Mary Nichols, and other Board members agreed that an independent auditor was a good suggestion. There is, however, no mention of an independent auditor in the Staff Supplemental Report. The following statement was in the Press Release issued by ARB following the meeting: "The Board directed ARB staff to consider several additional items related to the proposed commitments by the railroads. These include: … considering the use of an independent third party auditor to assess implementation progress;" … " ensuring data can be easily accessed and delivered in a user-friendly format; and considering the addition of a commitment by the railroads against any backsliding on progress to date.
2. Please advise if the inspections conducted by ARB inspectors are now "surprise inspections," as I had urged at the June 2010 Board meeting. My description of the inspections as allowing significant advanced notice seems to surprise the Board members, especially since there are few, if any, other workplace inspections by ARB or other state agencies which offer (in this case) 48 hours advance notice of inspections. If these are still announced inspections, is there an explanation why?

Questions re deployment of Gen-sets. I have questions about the data presented on Genset use in Southern California and on how ARB verifies it. An independent auditor could have assisted in this regard. Below is the text from the *Supplemental Staff Report:*

In 2007 and 2008, UP acquired 61 ARB-verified ultra-low emitting generator set (gen-set) switch locomotives. As a result, both the UP ICTF/Dolores Railyards and the UP Commerce Railyard have been nearly fully supported by gen-set switch locomotives since 2008. In 2010, BNSF acquired 11 gen-set switch locomotives through federal incentive funding, and assigned six gen-set switch locomotives to the BNSF Hobart Railyard, three gen-set switch locomotives to the BNSF San Bernardino Railyard, and two other gen-set switch locomotives to the BNSF Watson Railyard (a smaller railyard near the Ports of Los Angeles and Long Beach). In 2010-2011, BNSF also contracted through federal and State incentive funding programs to assign six more gen-set switch locomotives to the BNSF San Bernardino Railyard by 2012-13. As a result, staff has updated the railyard diesel PM emission estimates to include the gen-set switch locomotives that are currently operating or will be operating in the BNSF San Bernardino Railyard. Staff has also included the railyard diesel PM emission reductions from the six gen-sets currently operating at the BNSF Hobart Railyard. Staff assumes these railyard diesel PM emission reductions will occur by no later than 2015.

3. Questions re Gen-sets and UP: The text above states that UP acquired 61 GenSets in 2007-200, but the reader must assume that all of these were assigned to Southern California. How many Gensets are at UP ICTF and how many at UP Commerce? And has UP purchased no other Gensets since 2008? See text above from page A-14.
4. Questions re Gen-sets and BNSF: Note that the report text printed above from page A-14 describes that 11 Gensets were purchased in 2010 and assigned by BNSF to southern California, quite a difference from the 61 that UP has presumably assigned to southern California. The text above also states that by 2012-2013, BNSF will assign 6 more Gensets to BNSF San Bernardino for a total of 12 at BNSF San Bernardino. In another area (page F-78) the report states that 6 more will be assigned to Hobart in the next few years. "At that point, BNSF will be able to fully support both BNSF San Bernardino and BNSF Hobart Railyards with nearly all advanced technology units." That would be 23 Gensets in all of southern California, it appears, including 2 at Watson Yard. Am I reading the text accurately that this the total number of Genset locomotives assigned to southern California by BNSF? Or were Gensets put into operation at the four priority rail yards during earlier years (and not mentioned here)? If the number of Gensets at BNSF high priority yards is not higher than this, how can the 21 Gensets "fully support" the two yards – in light of the number that UP is said to have deployed and the much larger numbers mentioned below that are deployed in northern California?

The following information from a 2009 BNSF Employee Newsmagazine called *Railway* describes 74 new Gensets that were said to have been purchased by BNSF in 2008, noting that some of them were deployed in Texas and others in northern California. None were said to have been deployed in southern California, which arguably has the nation's worst air quality. Is there an explanation for why BNSF has deployed so few Gensets in southern California, if my reading of the document is correct?

Again, these figures are an example of text that is non-user friendly, when so many questions remain after reading what both UP and BNSF have done.

5. As a  a result of the above questions, I respectfully request that ARB staff please provide a table with the total number of Gensets *at each of the four priority railyards.* Also, in that table, can staff please detail how many of the Gensets *at each railyard* have been retro-fitted with diesel filters, as described in a power point presentation by Harold Holmes to the West Coast Diesel Collaborative? (See ARB Presentation_WCC Loco Sector Conf *Call_07_26_2011*.pptx).

Questions on what the Railroads have done as a result of mandates in ARB and U.S. EPA regulations versus what they have done through the voluntary agreement.

The June 24, 2010 press release also stated that: "The Board directed ARB staff to consider several additional items related to the proposed commitments by the railroads. These include: …"ensuring data can be easily accessed and delivered in a user-friendly format; …." This author still has difficulty understanding the contributions of different regulations and agreements to the overall claimed reduction in diesel emissions. I believe that this difficulty would be helped if ARB staff would please provide a user-friendly table with careful calculations of the percentage of DPM reductions that were achieved (1) by ARB/EPA regulations that were mandated for each source category versus (2) voluntary actions under the railroad agreements for each source category versus (3) the drop in cargo volume and how that affected each source category.

The table should state, for example, what percentage of the reductions from 2005 to 2010 were through mandated regulations on fuel, what percent through agreements on locomotive idling, what percent from voluntary changes in locomotives (and exactly what those changes were), what percent was due to changes in cargo volume, what percent was due to changes in the technical approach, etc. – and show this for EACH OF THE FOUR PRIORITY RAILYARDS.

From reading the report, it appears that the majority of the claimed reductions in DPM is due to Port and ARB/EPA regulations and drop in cargo volume rather than to the 1998 and 2005 voluntary agreements. See for example the statement from the report, below, describing Figure 2, and the information below describing Table 1. Also see the third graphic (with highlighting) below Table 1. It states that "several low emission switch engines" were added to the BNSF San Bernardino yard." How many? What percentage of the diesel emission reduction was due to these engines? What else did BNSF voluntarily do (since the highlights state that drayage trucks were primary and that cargo volume dropped)?

*SECTIONS FROM THE REPORT:*

Figure 2 compares the reduction in cancer risk versus the change in cargo activity. The recession-induced decline in cargo activity accelerated the reduction in health risk at three of the four yards, but it was not the primary factor. The risk associated with the UP Commerce Railyard also showed a substantial decrease, despite the net increase in cargo activity. The figure illustrates that the significant reduction in health risk between 2005 and 2010 is driven by the introduction of cleaner trucks, equipment, locomotives, and fuel in response to adopted regulations and agreements.

**Table 1**
**Updated Reduction in Diesel PM Health Risk with the Revised 2010 Commitments at the Four High-Priority Railyards in Southern California**

| Railyard | Maximum Individual Cancer Risk for 70-Year Exposure* (chances per million) | | | |
|---|---|---|---|---|
| | 2005 | 2010 | 2015 | 2020 |
| BNSF San Bernardino | 2,500 | 650 | 500 | 275 |
| BNSF Hobart | 500 | 180 | 120 | 75 |
| UP Commerce | 500 | 290 | 155 | 75 |
| UP ICTF/Dolores | 800 | 190 | 180 | 120 |

* Risk estimates for BNSF San Bernardino Railyard consider both the source and location of the diesel PM emissions within the railyard in each year, consistent with the method used to develop the 2005 numbers. For the other railyards, the 2005 and later risk estimates are based on the total diesel PM emissions within each railyard facility.

The key factor in the sharp risk reduction at the BSNF San Bernardino Railyard is the transition of most of the drayage truck fleet to cleaner models by 2010, as required by ARB regulation. The risk estimate for this yard reflects the use of cleaner equipment of all types (including the introduction of several low-emission switch locomotives co-funded by federal and State incentives), a drop in cargo activity from 2005 to 2010, and a more refined technical approach. Consistent with the health risk assessment that generated the 2005 number, ARB staff applied the same methodology that considers both the source and location of diesel PM emissions to estimate the cancer risk in 2010, 2015, and 2020. This means that the diesel PM emission sources that operate closest to where people live (like drayage trucks) have a greater impact on risk and risk reductions than the equipment that operates further away.

<u>Questions on how ARB has calculated the reduction in cancer risk</u>

It appears that the ARB has taken an across the board reduction in DPM cancer risk (based on DPM reductions) rather than looking at the LOCATION and SOURCES of the actual DPM reductions. In other words, it does not seem to be a guarantee that the MICR would necessarily be reduced the equivalent percentage. Using that methodology would only seem to work for those who are near the truck routes. As noted, the decrease in locomotive emissions is much less. Those whose risk overall is increased by emissions from locomotives, would not see the same cancer reduction. E.g, if someone lives near a load testing facility, his/her risk would likely be nearly as high now as it was several years ago, at least by my reading of the Tables.

2. BNSF Hobart

**Table A-12**
**BNSF Hobart Railyard**
**Updated Estimated Diesel PM Emissions by Equipment Type**
(tons per year)

| Equipment Type | 2005 | 2010 | 2015 | 2020 |
|---|---|---|---|---|
| **Emissions with Existing Program Only** | | | | |
| Freight Locomotives | | | | |
| - Line Haul | 3.2 | 2.0 | 2.3 | 2.8 |
| - Switch | 2.2 | 1.7 | 1.0 | 1.2 |
| - Service/Testing | 0 | 0 | 0 | 0 |
| *Subtotal for Locomotives* | *5.4* | *3.7* | *3.3* | *4.0* |
| Cargo Handling Equipment | 5.9 | 2.4 | 1.2 | 0.8 |
| Drayage Trucks | 10.7 | 1.7 | 1.7 | 1.4 |
| Transport Refrigeration Units | 2.1 | 0.9 | 0.7 | 0.3 |
| Maintenance/Stationary | 0.1 | 0.1 | 0.1 | 0.1 |
| *Subtotal for Other Equipment* | *18.8* | *5.1* | *3.7* | *2.6* |
| **Total Tons** | **24.2** | **8.8** | **7.0** | **6.6** |
| Reduction (%) from 2005 | N/A | 64% | 71% | 73% |
| | | | | |
| **Emissions with Existing Program plus Revised 2010 Commitments** | | | | |
| Additional Emission Reductions with Commitments | N/A | N/A | -1.2 | -3.0 |
| **Tons Remaining** | **24.2** | **8.8** | **5.8** | **3.6** |
| Reduction (%) from 2005 | N/A | 64% | 76% | 85% |
| | | | | |
| **Additional Reduction (%) Attributable to the Commitments in Future Years** | N/A | N/A | **17%** | **45%** |

**Table A-10**
**BNSF San Bernardino Railyard**
**Updated Estimated Maximum Individual Cancer Risk**

| | Excess Maximum Individual Cancer Risk for 70-Year Exposure* (chances in a million) | | | |
|---|---|---|---|---|
| | **2005** | **2010** | **2015** | **2020** |
| Existing Program | 2,500 | 650 | 510 | 400 |
| Existing Program + Commitments | N/A | 650 | 500 | 275 |
| | | | | |
| Total Reduction (%) from 2005 Due to Existing Program + Commitments | N/A | 74% | 80% | 89% |

* Estimated cancer risk considers the source and location of the diesel PM emissions within the railyard.

**Table A-11**
**BNSF San Bernardino Railyard**
**Updated Estimated Population Exposure to Excess Cancer Risk Greater than 10 in a Million**

| | Number of People Exposed | | | |
|---|---|---|---|---|
| | **2005** | **2010** | **2015** | **2020** |
| Existing Program | 350,000 | 187,000 | 140,000 | 137,000 |
| Existing Program + Commitments | N/A | 187,000 | 135,000 | 69,000 |
| | | | | |
| Total Reduction (%) from 2005 Due to Existing Program + Commitments | N/A | 47% | 61% | 80% |

*Other comments and questions:*

1. Residents continue to complain about load testing that occurs in different areas of their communities, yet there does not seem to be any increased risks identified in maps reflecting load testing.
2. Residents around the other 14 railyards should be notified that BNSF and UP are not planning to reduce diesel emissions at their yards during the next 5-10 years or more -- and why.
3. Please explain why the UP Commerce demonstration of the bonnet not been completed; it has been described as upcoming for a number of years now.
4. Page F78 tells us which yards are using the 20 non-preempted tier 0 locomotives, need to know that they are not all in one yard. Same with 60, should not be operating in any part of California that is in non attainment.

5. Page F-82 states that "At each railyard, the container trucks take a freeway route on exiting." It is simply not true that truck enter a freeway immediately upon exiting each railyard. For example, efforts are planned in Commerce is to widen stretches of Washington Boulevard to handle more trucks from the UP Commerce and BNSF Hobart rail yards. They travel a significant distance on Washington Boulevard before they get onto the I-710 (and vice-versa). To get to the UP ICTF, trucks travel 4-5 miles from the Ports on a 4-lane undivided road that is called the Terminal Island Freeway but that is actually not a "freeway;" the Terminal Island Freeway goes past schools and homes and community gardens and day care centers. This "Freeway" is "owned" by the City of Long Beach, as I understand it.
6. Monitoring. I urge the ARB to monitor for PM2.5 and also for NO2 and Elemental and Organic Carbon. I urge the ARB to have a public process with the impacted community residents and groups so that they know where the monitor(s) will be located and can have input if they believe that the location is not reflective of areas with high emissions.
7. The commitments at UP ICTF do not seem to bring any added value to reducing the number of people exposed until 2020. See Table A-20. Can the ARB please explain what type of activity is going to occur under the commitments between 2015 and 2020 to reduce the number of individuals exposed that is not happening in the earlier years?

Thank you for consideration of my comments.

**Table A-19**
**UP ICTF/Dolores Railyards**
**Updated Estimated Maximum Individual Cancer Risk**

| | Excess Maximum Individual Cancer Risk for 70-Year Exposure (chances in a million) | | | |
|---|---|---|---|---|
| | **2005** | **2010** | **2015** | **2020** |
| Existing Program | 800 | 190 | 180 | 180 |
| Existing Program + Commitments | N/A | 190 | 180 | 120 |
| | | | | |
| Total Reduction (%) from 2005 Due to Existing Program + Commitments | N/A | 76% | 76% | 85% |

**Table A-20**
**UP ICTF/Dolores Railyards**
**Updated Estimated Population Exposure to Excess Cancer Risk Greater than 10 in a Million**

| | Number of People Exposed | | | |
|---|---|---|---|---|
| | **2005** | **2010** | **2015** | **2020** |
| Existing Program | 600,000 | 156,000 | 143,000 | 123,000 |
| Existing Program + Commitments | N/A | 156,000 | 143,000 | 65,500 |
| | | | | |
| Total Reduction (%) from 2005 Due to Existing Program + Commitments | N/A | 76% | 76% | 89% |